

CLAIMS:

1. A colloidal suspension of a LEV structure type crystalline molecular sieve.

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2. A suspension as claimed in claim 1, wherein the mean size of the LEV particles is within the range of from 5 to 1000 nm.

10 3. A suspension as claimed in claim 2, wherein the range is from 10 to 300 nm.

4. A suspension as claimed in claim 3, wherein the range is from 20 to 100 nm.

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5. A suspension as claimed in claim 1, wherein the mean size of the LEV particles is at most 100 nm.

6. A method for preparing a suspension as claimed in any  
20 preceding claim, which comprises synthesizing a LEV structure type crystalline molecular sieve by treatment of a synthesis mixture containing the elements necessary to form a LEV crystalline molecular sieve, separating the resulting LEV crystalline molecular sieve product from the synthesis  
25 mixture, washing the product, and recovering the resulting wash liquid.

7. A method as claimed in claim 6, wherein the recovered wash liquid is the liquid resulting from the second or  
30 subsequent washing.

8. The product of the method of claim 6 or claim 7.

9. Colloidal LEV crystals when recovered from a suspension as claimed in any one of claims 1 to 5 or prepared by a method as claimed in claim 6 or claim 7 and separation from the wash liquid.

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10. A process for the manufacture of a crystalline molecular sieve, which process comprises treating a synthesis mixture comprising elements necessary to form the molecular sieve and colloidal LEV crystalline molecular sieve seeds for a time  
10 and at a temperature appropriate to form the desired molecular sieve.

11. A process as claimed in claim 10, wherein the desired molecular sieve is of the LEV structure type.

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12. A process as claimed in claim 11, wherein the desired molecular sieve is Levyne, ZK-20, NU-3 or ZSM-45.

13. A process for the manufacture of a crystalline molecular  
20 sieve, which comprises treating a synthesis mixture comprising elements necessary to form a molecular sieve of a first structure type, other than LEV, and colloidal LEV molecular sieve seed crystals for a time sufficient and at a temperature appropriate to form the molecular sieve of the  
25 first structure type.

14. The invention as claimed in claim 11, in which colloidal LEV structure type seeds are used in the manufacture of a crystalline molecular sieve of the MFS, CHA, OFF, MOR, FER,  
30 MAZ, EUO or ERI/OFF, structure type.

15. A process as claimed in claim 14, wherein the crystalline molecular sieve manufactured is chabasite, a phosphorus-containing molecular sieve of the CHA structure

type, mordenite, ferrierite, Linde Zeolite T, mazzite, offretite, ZSM-57, ZSM-38, or ZSM-50.

16. The use, in the synthesis of a crystalline molecular  
5 sieve other than of LEV structure type by thermal treatment of a synthesis mixture suitable for the manufacture of that molecular sieve, of colloidal LEV seed crystals to control the morphology of the product.
- 10 17. The use as claimed in claim 16, wherein colloidal LEV seeds are used to form Linde Zeolite T of disk-like morphology.
18. The use, in the synthesis of a crystalline molecular  
15 sieve, of colloidal LEV seed crystals to control a characteristic of the resulting crystalline molecular sieve.
19. The use as claimed in claim 18, wherein the  
20 characteristic is the purity, the particle size, or the particle size distribution.
20. The use in the synthesis of a crystalline molecular sieve of colloidal LEV seed crystals to facilitate  
25 manufacture of the molecular sieve in the substantial absence of an organic structure-directing agent, or to accelerate the formation of the product.
21. The crystalline molecular sieve produced by the process  
30 or use claimed in any one of claims 10 to 20.
22. The crystalline molecular sieve of claim 21, in a chemical form suitable for use as a catalyst or a separation or absorption medium.

23. A hydrocarbon conversion, separation, or absorption carried out using a sieve as claimed in claim 22.

24. An oxygenate conversion using a sieve as claimed in  
5 claim 22.